QUARTERLY PROGRESS REPORT OCTOBER THROUGH DECEMBER 2014 DIESEL FUEL FREE PRODUCT RECOVERY LOCOMOTIVE AND MOBILE EQUIPMENT SHOP

ARCELORMITTAL STEEL USA 250 WEST US HIGHWAY 12 BURNS HARBOR, INDIANA

Prepared for:



Environmental Services 250 West US Highway 12 Burns Harbor, IN 46304 WEAVER
BOOS
CONSULTANTS

February 16, 2015 Project No. 2387354-04-10

Ms. Theresa Kirk Environmental Engineer ArcelorMittal Burns Harbor, LLC 250 West U.S. Highway 12 Burns Harbor, IN 46304-9745

Re: Quarterly Progress Report

October 2014 through December 2014 Diesel Fuel Free Product Recovery Locomotive and Mobile Equipment Shop

Dear Ms. Kirk:

Weaver Boos Consultants, LLC (Weaver Boos) has completed this report as described in Weaver Boos Budgetary Quote M90405-P, dated June 23, 2014, and as authorized by ArcelorMittal Steel USA (ArcelorMittal) Purchase Order No. B371528.

BACKGROUND INFORMATION AND PURPOSE

A subsurface release of diesel fuel was discovered north of the Locomotive and Mobile Equipment Shop during a routine construction project in December 2007. The release was encountered during excavation for a foundation pier for a new locomotive fuel dispensing system. A likely source of the release was subsequently found to be the underground pipe that formerly conveyed the diesel fuel from the above ground storage tank (AST) to the former locomotive fueling rack at the locations shown on **Figure 1**.

Immediate responses mounted by ArcelorMittal included the use of a vacuum truck to recover liquid diesel fuel and water found perched in shallow subsurface fill soil. Follow up responses included the excavation and off-site disposal of approximately 3,100 cubic yards of diesel fuel-impacted soil and recovery of liquid diesel fuel using a vacuum truck beginning on December 5, 2007. The volume of diesel fuel vacuumed directly from the excavation was not measured or tallied, but is estimated by Weaver Boos to have comprised several thousand gallons based on our visual observations of the effort. When the excavation was concluded April 8, 2008, soil

samples indicated that the sidewall banks were remediated to Indiana Department of Environmental Management (IDEM) industrial default closure levels. The occurrence of groundwater at approximately 8 to 10 ft below ground surface precluded the removal of deeper soils exceeding industrial default closure levels at the base of the excavation, as did the need to restore two rail lines that were temporarily removed to facilitate the remediation. By May 6, 2008, the excavation was backfilled and replacement of the tracks was substantially complete. The foregoing response actions are described in the following report: *Corrective Action Completion Report for Diesel Fuel-Impacted Soil*, July 31, 2008, Weaver Boos Consultants, LLC, South Bend, Indiana.

As the soil remediation was being completed in early 2008, ArcelorMittal was aware that free product remained along the surface of the water table, and therefore retained Weaver Boos to design, install, and operate a free product recovery system utilizing vacuum enhanced in-well skimming technology. The free product recovery system was completed and placed into operation on March 18, 2009 as described in the following report: Progress Report, Diesel Fuel Free Product Recovery, Locomotive and Mobile Equipment Shop, dated August 4, 2009. This report summarizes the continuing operation of the remediation system and results obtained through the fourth quarter of 2014 (4Q2014).

OPERATIONS AND MAINTENANCE

Operation of the remediation system has been nearly continuous since it was placed into service. Weaver Boos operated, monitored, and maintained the system during weekly site visits consistent with the standard operating procedure (SOP) provided with the first written progress report. Performance is measured by gauging the accumulation tank and by checking the apparent thickness of diesel fuel free product in the recovery wells. Operating parameters requiring adjustment include setting the vacuum level (12 to 16 inches of water) and setting the pump intake levels to match fluctuating groundwater levels in the wells. Maintenance items included checking and replacement of the vapor extraction system's inline filter as needed, checking and replacement of the air compressor intake filter as needed, regular replacement of the air compressor lubricating oil, and clearing the vapor extraction collection lines of condensate each week.

Weekly operations and maintenance report forms completed between October 3, 2014 and December 26, 2014 are provided in **Appendix A**. The system operated continuously until mid-



December when tube connectors on two pumps failed due to age and wear. One compression fitting connecting an air hose to RW-3's pump failed on December 16, and the pump was disconnected from the system and removed from the facility for maintenance. On Dec. 23, another compression fitting on RW-4's pump failed to securely attach an air hose. Replacement of these tube fittings can restore the pumps to operation, but Weaver Boos recommends that they be returned to Xitech for rehabilitation under their lifetime warranty.

RESULTS

The remediation system has thus far recovered approximately 1,396 gallons of diesel fuel and approximately 1,800 gallons of ancillary groundwater since remediation began on March 18, 2009. The quantities of diesel fuel and water collected by the remediation system are summarized on **Table 1**. For 4Q2014, the initial and final volume of fuel in the accumulation tank was the same. Thus, the recovery of diesel fuel in the fourth quarter was estimated at zero gallons, or very close to zero.

Cumulative diesel fuel recovered is charted as shown on **Figure 2**. The chart of cumulative free product recovered shows relatively rapid and steady accumulation through 2009 when 598 gallons were recovered. After 2009, the accumulation of free product tapered. Noticeable upticks in accumulation of free product occurred in the spring/summer of 2010, 2011, 2012, and 2013. Seasonality of free product recovery remains apparent as shown on the following table, but the total recovered during 4Q2014 is the smallest amount recorded in any fourth quarter thus far. The trend moreover indicates that the total volume of free product collected during 2014, 34 gallons, is the lowest recorded on an annual basis. Practicably recoverable free product appears to be exhausted.

Diesel Fuel Free Product Recovery by Year and Quarter (gallons)

Ougeton			Year			Subtotals:	Percent of		
Quarter	2010	2011	2012	2013	2014	Subtotals.	Subtotal:		
1Q	16	17	13	19	3	68	8.49%		
2Q	71	64	12	69	22	238	29.71%		
3Q	73	198	30	104	9	414	51.69%		
4Q	32	16	23	10	0	81	10.11%		
Subtotals:	192	295	78	202	34	801	100.00%		



The calculated rate of diesel fuel recovery (gallons per day) is charted on **Figure 3**. Several peaks approaching 8 gallons per day are indicated since remediation began, but the average rate is usually much lower. The most recent quarter ending December 26, 2014 shows that recovery rate averaged zero gallons per day. Negative rates reflect either difficulty in accurately reading the water level in the accumulation tank by our operator who uses color-changing water-finding paste applied to a tape measure for this purpose, or possibly the cross-dissolution of water and oil between the separate liquid phases. Evaporative loss of the fuel floating atop the water layer is also possible, as the accumulation tank is vented to the atmosphere. Such dissolution and evaporation might depend upon ambient temperature, pressure gradients, or other factors.

The apparent thickness of free product measured in recovery wells RW-1, RW-2, RW-3, and RW-4 is listed in **Table 2**. The thickness is described as "apparent" because it represents what is present in the well at the time of measurement and does not necessarily represent the thickness of mobile free product in the aquifer. The actual thickness in the aquifer formation is usually less than the apparent thickness measured in a well. Additionally, the applied vacuum tends to increase the thickness of free product in a well, while the regular pumping of the recovery wells reduces its thickness. Time trends of apparent free product thickness are charted for the recovery wells as shown in **Figure 4**. The apparent thickness of free product measured during 4Q2014 remained at or near zero inches in RW-1 and RW-2. The apparent thickness of free product measured during 4Q2014 averaged 0.47 inches in RW-3 and 0.31 inches in RW-4.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

With consideration for our observations, measurements, results obtained, and the relevant standards for assessing the effectiveness of corrective action, Weaver Boos concludes the following consistent with prevailing professional principles and practice:

• Immediate responses mounted by ArcelorMittal to the historical release of diesel fuel included the use of a vacuum truck to recover liquid diesel fuel and water found perched in shallow subsurface fill soil. Follow up responses included the excavation and off-site disposal of approximately 3,100 cubic yards of diesel fuel-impacted soil and recovery of additional liquid diesel fuel using a vacuum truck beginning on December 5, 2007. When the excavation was concluded April 8, 2008, soil samples indicated that the sidewall banks were remediated to industrial default closure levels.



- The occurrence of groundwater at approximately 8 to 10 ft below ground surface precluded the removal of deeper soils exceeding industrial default closure levels at the base of the excavation, as did the need to restore two rail lines that were temporarily removed to facilitate the remediation. By May 6, 2008, the excavation was backfilled and replacement of the tracks was substantially complete.
- Following the remediation of the accessible diesel fuel-impacted soil, active recovery of free product from atop the shallow water table began in March 2009 and continued through December 2014 as described herein. The remediation system has thus far recovered approximately 1,396 gallons of diesel fuel since remediation began on March 18, 2009. The estimated recovery of diesel fuel for the fourth quarter ending on December 26, 2014 is estimated to be zero gallons. This indicates a recovery rate of less than one gallon per month for 4Q2014. This rate is below the 2 gallon per month termination criteria listed several times in U.S. EPA's 1996 Guide for State Regulators: How to Effectively Recover Free Product at Leaking Underground Storage Tanks Sites (EPA 510-R-96-001).
- Early in the remediation process, the apparent thickness of free product measured in the remediation wells indicated peak measurements as great as 8.0 inches to 10.5 inches. Except for one outlying observation of 6.0 inches in recovery well RW-3 on July 23, 2014, the greatest thickness of free product observed in the weekly monitoring results during 4Q2014 was 1.0 inch, which is less than the 0.1 ft threshold thickness value also listed several times in *EPA 510-R-96-001* as a remediation criterion.
- The remediation system continues to operate as designed, but routine wear-and-tear has
 worn out several hose-to-pump connectors in RW-3 and RW-4's pumps. Weaver Boos
 recommends that they be overhauled under warranty if they are needed further.
- Based on the overall results obtained, practicably recoverable free product appears to be exhausted. If 1Q2015 is typical of the previous four years, little if any additional free product is anticipated to be recovered.



Recommendations

Weaver Boos recommends and requests that the remedial operation be terminated because practicably recoverable free product is exhausted. Operations will continue as directed by ArcelorMittal pending approval of this request for termination.

Weaver Boos appreciates this opportunity to be of service. If there are any comments or questions regarding this report, please do not hesitate to call us at (574) 271-3447.

Very truly yours,

Weaver Boos Consultants, LLC

Steven M. Stanford, LPG

Ster M. Sterfas

Manager, Granger Environmental Operations

Attachments:

Figure 1 – Remediation System Layout, Locomotive & Mobile Equipment Shop

Figure 2 – Cumulative Free Product Recovery

Figure 3 – Rate of Diesel Fuel Recovery

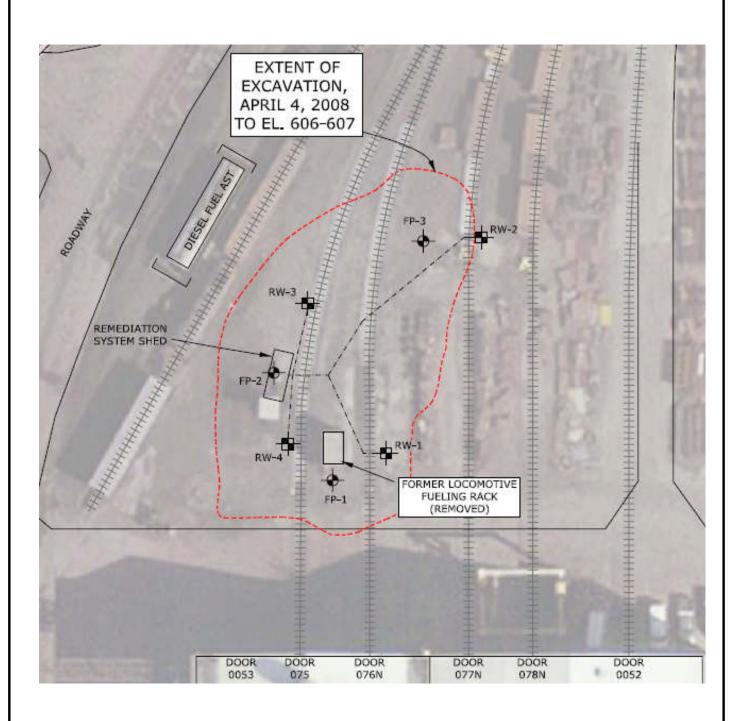
Figure 4 – Apparent Thickness of Free Product in Wells

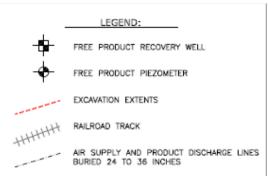
Table 1 – Diesel Fuel Free Product Recovery Summary

Table 2 – Apparent Thickness of Free Product in Wells

Appendix A – Weekly Operations and Maintenance Reports







REMEDIATION SYSTEM LAYOUT LOCOMOTIVE & MOBILE EQUIPMENT SHOP

ARCELORMITTAL BURNS HARBOR, LLC BURNS HARBOR, INDIANA

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CHICAGO, IL FT. WORTH, TX	SOUTH BEND, IN (574) 271-3447	NAPERVILLE, IL SPRINGFIELD, IL
DRAWN BY: SMS	DATE: 12/14/09	FILE: 2387354-04
REVIEWED BY: SMS	CAD: SitePL.tcw	FIGURE 1

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FIGURE 2
Cumulative Free Product Recovered
Locomotive and Mobile Equipment Shop

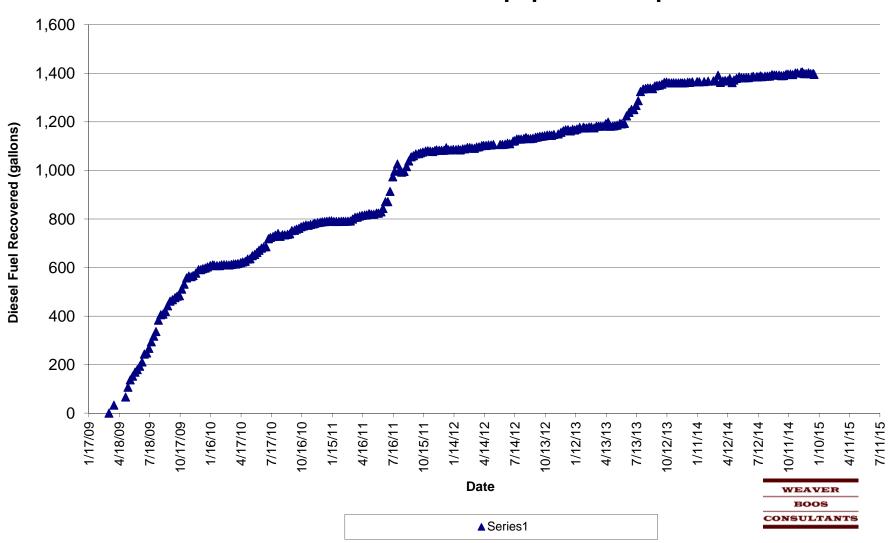
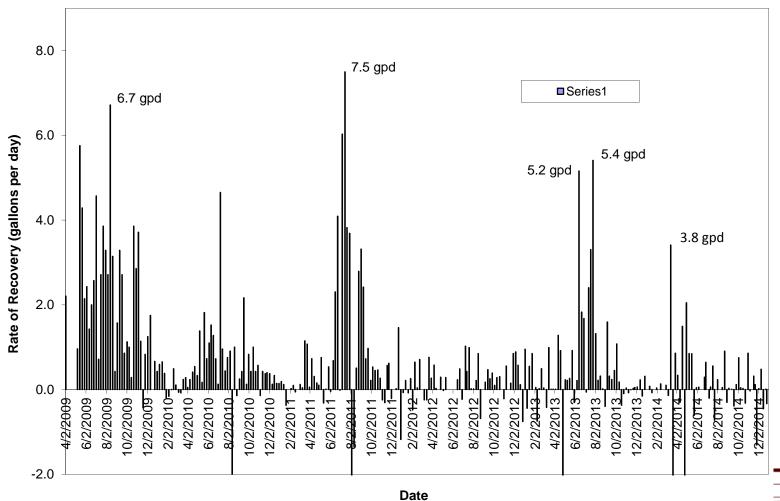
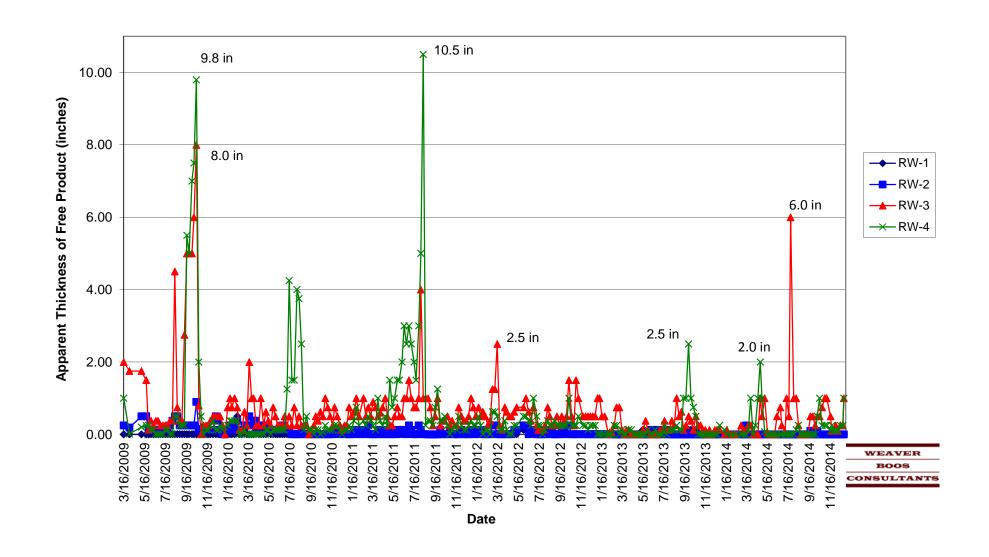


FIGURE 3
Rate of Diesel Fuel Recovery (gallons per day)
Locomotive and Mobile Equipment Shop



WEAVER BOOS CONSULTANTS

FIGURE 4
Apparent Thickness of Free Product in Wells
Locomotive and Mobile Equipment Shop



Date	Water in Recovery Tank (gallons)	Cumulative Total Ancillary Groundwater Removed from the Subsurface (gallons)	Diesel Fuel Product in Recovery Tank (gallons)	Cumulative Total Diesel Fuel Product Removed from the Subsurface (gallons)
3/18/2009	0	0	0	0
4/2/2009	9	9	33	33
5/7/2009	17	17	67	67
5/14/2009	15	15	107	107
5/21/2009	21	21	137	137
5/28/2009	19	19	152	152
6/4/2009	22	22	169	169
6/11/2009	25	25	179	179
6/18/2009	25	25	193	193
6/25/2009	21	21	211	211
7/2/2009	23	23	243	243
7/9/2009	25	25	248	248
7/16/2009	25	25	267	267
7/23/2009	26	26	294	294
7/30/2009	26	26	317	317
8/6/2009	26	26	336	336
8/13/2009	12	38	47	383
8/20/2009	12	38	69	405
8/27/2009	12	38	72	408
9/3/2009	12	38	83	419
9/10/2009	13	39	106	442
9/17/2009	13	39	125	461
9/24/2009	13	39	131	467
10/2/2009	14	40	140	476
10/8/2009	15	41	146	482
10/15/2009	15	41	148	484
10/22/2009	16	42	175	511
10/29/2009	16	42	195	531
11/5/2009	31	57	221	557
11/12/2009	47	73	229	565
11/19/2009	57	83	226	562
11/25/2009	62	88	231	567
12/3/2009	62	88	241	577
12/11/2009	62	88	255	591
12/18/2009	63	89	255	591
12/24/2009	64	90	259	595
12/31/2009	64	90	262	598
1/7/2010	62	88	266	602
1/15/2010	62	88	271	607
1/22/2010	59	85	274	610
1/27/2010	62	88	273	609
2/4/2010	63	89	272	608
2/12/2010	63	89	272	608
2/18/2010	62	88	275	611
2/25/2010	64	90	276	612
3/5/2010	66	92	275	611
3/12/2010	67	93	274	610

Date	Water in Recovery Tank (gallons)	Cumulative Total Ancillary Groundwater Removed from the Subsurface (gallons)	Diesel Fuel Product in Recovery Tank (gallons)	Cumulative Total Diesel Fuel Product Removed from the Subsurface (gallons)
3/26/2010	68	94	278	614
4/1/2010	69	95	278	614
4/8/2010	70	96	280	616
4/16/2010	70	96	283	619
4/22/2010	70	96	287	623
4/30/2010	70	96	289	625
5/7/2010	71	97	299	635
5/14/2010	73	99	300	636
5/21/2010	73	99	313	649
5/28/2010	75	101	318	654
6/4/2010	75	101	326	662
6/10/2010	75	101	335	671
6/17/2010	75	101	344	680
6/24/2010	3	104	5	685
7/1/2010	3	104	6	686
7/8/2010	6	107	38	718
7/14/2010	29	130	44	724
7/22/2010	42	143	47	727
7/29/2010	98	199	53	733
8/6/2010	151	252	60	740
8/12/2010	204	305	48	728
8/19/2010	245	346	55	735
8/26/2010	286	387	54	734
9/3/2010	313	414	56	736
9/10/2010	327	428	59	739
9/16/2010	7	435	13	752
9/24/2010	9	437	14	753
9/30/2010	13	441	19	758
10/7/2010	15	443	22	761
10/14/2010	18	446	29	768
10/21/2010	19	447	32	771
10/28/2010	21	449	36	775
11/4/2010	19	447	35	774
11/11/2010	19	447	38	777
11/19/2010	21	449	41	780
11/24/2010	22	450	43	782
12/2/2010	22	450	46	785
12/10/2010	22	450	47	786
12/16/2010	22	450	49	788
12/23/2010	22	450	50	789
12/30/2010	22	450	51	790
1/6/2011	22	450	52	791
1/13/2011	22	450	53	792
1/20/2011	23	451	51	790
1/27/2011	23	451	51	790
2/4/2011	24	452	51	790
2/11/2011	24	452	51	790
2/17/2011	25	453	51	790
2/24/2011	25	453	51	790
3/3/2011	26	454	52	791

Date	Water in Recovery Tank (gallons)	Cumulative Total Ancillary Groundwater Removed from the Subsurface (gallons)	Diesel Fuel Product in Recovery Tank (gallons)	Cumulative Total Diesel Fuel Product Removed from the Subsurface (gallons)
3/10/2011	26	454	52	791
3/17/2011	21	449	60	799
3/24/2011	24	452	68	807
3/31/2011	33	461	68	807
4/7/2011	34	462	73	812
4/14/2011	35	463	75	814
4/22/2011	36	464	77	816
4/28/2011	42	470	77	816
5/5/2011	49	477	83	822
5/12/2011	59	487	80	819
5/19/2011	67	495	81	820
5/27/2011	73	501	85	824
6/2/2011	78	506	85	824
6/10/2011	84	512	90	829
6/16/2011	87	515	104	843
6/23/2011	95	523	133	872
6/30/2011	119	547	132	871
7/7/2011	132	560	175	914
7/15/2011	144	572	235	974
7/21/2011	6	578	23	997
7/29/2011	15	587	52	1,026
8/4/2011	64	636	28	1,002
8/11/2011	107	679	18	992
8/18/2011	119	691	22	996
8/25/2011	122	694	42	1,016
9/1/2011	122	694	65	1,039
9/8/2011	124	696	82	1,056
9/15/2011	124	696	87	1,061
9/22/2011	124	696	94	1,068
9/30/2011	124	696	95	1,069
10/6/2011	119	691	98	1,072
10/13/2011	119	691	102	1,076
10/21/2011	122	694	105	1,079
10/28/2011	124	696	107	1,081
11/4/2011	126	698	106	1,080
11/11/2011	128	700	103	1,077
11/18/2011	125	697	107	1,081
11/23/2011	122	694	110	1,084
12/1/2011	122	694	109	1,083
12/8/2011	122	694	109	1,083
12/15/2011	124	696	109	1,083
12/22/2011	112	684	119	1,093
12/29/2011	127	699	111	1,085
1/5/2012	129	701	110	1,084
1/12/2012	129	701	112	1,086
1/20/2012	132	704	111	1,085
1/27/2012	132	704	113	1,087
2/2/2012	135	707	110	1,084
2/9/2012	132	704	115	1,089
2/16/2012	133	705	115	1,089

Date	Water in Recovery Tank (gallons)	Cumulative Total Ancillary Groundwater Removed from the Subsurface (gallons)	Diesel Fuel Product in Recovery Tank (gallons)	Cumulative Total Diesel Fuel Product Removed from the Subsurface (gallons)
2/23/2012	132	704	120	1,094
3/1/2012	132	704	120	1,094
3/8/2012	132	704	118	1,092
3/15/2012	132	704	116	1,090
3/22/2012	133	705	122	1,096
3/29/2012	135	707	124	1.098
4/6/2012	132	704	128	1,102
4/12/2012	132	704	128	1,102
4/19/2012	132	704	128	1,102
4/26/2012	135	707	131	1,105
5/4/2012	136	708	130	1,104
5/11/2012	136	708	132	1,106
5/31/2012	136	708	132	1,106
6/7/2012	136	708	132	1,106
6/15/2012	138	710	134	1,108
6/22/2012	138	710	138	1,112
6/29/2012	140	712	136	1,110
7/9/2012	140	712	146	1,120
7/13/2012	140	712	148	1,122
7/20/2012	141	713	155	1,129
7/26/2012	143	715	155	1,129
8/2/2012	144	716	155	1,129
8/10/2012	144	716	157	1,131
8/16/2012	144	716	162	1,136
8/23/2012	151	723	157	1,131
8/30/2012	151	723	157	1,131
9/6/2012	0	723	1	1,132
9/14/2012	1	724	5	1,136
9/20/2012	4	727	7	1,138
9/27/2012	5	728	9	1,140
10/4/2012	5	728	10	1,141
10/11/2012	5	728	12	1,143
10/19/2012	6	729	15	1,146
10/26/2012	6	729	15	1,146
11/1/2012	7	730	13	1,144
11/8/2012	7	730	17	1,148
11/21/2012	7	730	19	1,150
11/29/2012	47	770	26	1,157
12/6/2012	78	801	32	1,163
12/13/2012	89	812	36	1,167
12/20/2012	108	831	37	1,168
12/27/2012	119	842	32	1,163
1/3/2013	122	845	38	1,169
1/9/2013	135	858	36	1,167
1/16/2013	148	871	39	1,170
1/24/2013	151	874	46	1,177
2/4/2013	164	887	47	1,178
2/8/2013	177	900	44	1,175
2/14/2013	184	907	44	1,175
2/21/2013	184	907	47	1,178

Date	Water in Recovery Tank (gallons)	Cumulative Total Ancillary Groundwater Removed from the Subsurface (gallons)	Diesel Fuel Product in Recovery Tank (gallons)	Cumulative Total Diesel Fuel Product Removed from the Subsurface (gallons)
2/28/2013	197	920	48	1,179
3/8/2013	201	924	44	1,175
3/15/2013	207	930	51	1,182
3/22/2013	214	937	51	1,182
3/28/2013	221	944	51	1,182
4/4/2013	224	947	51	1.182
4/12/2013	224	947	62	1,193
4/19/2013	252	975	68	1,199
4/26/2013	289	1,012	51	1,182
5/3/2013	301	1,024	52	1,183
5/9/2013	301	1,024	54	1,185
5/16/2013	7	1,031	1	1,186
5/24/2013	12	1,036	9	1,194
5/30/2013	21	1,045	7	1,192
6/7/2013	28	1,052	9	1,194
6/13/2013	38	1,062	40	1,225
6/21/2013	62	1,086	54	1,239
6/28/2013	87	1,111	66	1,251
7/5/2013	122	1,146	66	1,251
7/12/2013	132	1,156	82	1,267
7/18/2013	146	1,170	102	1,287
7/25/2013	149	1,173	140	1,325
8/2/2013	156	1,180	151	1,336
8/9/2013	163	1,187	152	1,337
8/16/2013	167	1,191	154	1,339
8/23/2013	174	1,198	154	1,339
8/30/2013	187	1,211	152	1,337
9/6/2013	184	1,208	163	1,348
9/12/2013	1	1,209	2	1,350
9/19/2013	3	1,211	3	1,351
9/27/2013	5	1,213	7	1,355
10/4/2013	6	1,214	15	1,363
10/11/2013	7	1,215	16	1,364
10/18/2013	7	1,215	13	1,361
10/25/2013	8	1,216	13	1,361
11/1/2013	9	1,217	13	1,361
11/8/2013	10	1,218	12	1,360
11/15/2013	10	1,218	12	1,360
11/22/2013	11	1,219	12	1,360
11/27/2013	12	1,220	13	1,361
12/4/2013	12	1,220	13	1,361
12/13/2013	10	1,218	15	1,363
12/19/2013	10	1,218	14	1,362
12/27/2013	12	1,220	17	1,365
1/10/2014	12	1,220	18	1,366
1/17/2014	12	1,220	17	1,365
1/31/2014	12	1,220	18	1,366
2/12/2014	13	1,221	19	1,367
2/28/2014	15	1,223	21	1,369
3/7/2014	18	1,226	20	1,368

Date	Water in Recovery Tank (gallons)	Cumulative Total Ancillary Groundwater Removed from the Subsurface (gallons)	Diesel Fuel Product in Recovery Tank (gallons)	Cumulative Total Diesel Fuel Product Removed from the Subsurface (gallons)
3/14/2014	29	1,237	44	1,392
3/21/2014	75	1,283	14	1,362
3/28/2014	78	1,286	20	1,368
4/4/2014	135	1,343	23	1,371
4/11/2014	207	1,415	20	1,368
4/18/2014	245	1,453	31	1,379
4/25/2014	259	1,467	14	1,362
4/30/2014	269	1,477	24	1,372
5/8/2014	269	1,477	31	1,379
5/16/2014	272	1,480	38	1,386
5/23/2014	320	1,528	33	1,381
5/30/2014	385	1,593	34	1,382
6/6/2014	5	1,598	0	1,382
6/13/2014	10	1,603	0	1,382
6/23/2014	7	1,600	3	1,385
6/27/2014	5	1,598	5	1,387
7/7/2014	13	1,606	3	1,385
7/11/2014	17	1,610	4	1,386
7/18/2014	17	1,610	8	1,390
7/23/2014	23	1,616	4	1,386
8/1/2014	23	1,616	6	1,388
8/8/2014	23	1,616	6	1,388
8/15/2014	26	1,619	6	1,388
8/22/2014	49	1,642	13	1,395
8/29/2014	59	1,652	11	1,393
9/4/2014	64	1,657	11	1,393
9/12/2014	67	1,660	11	1,393
9/19/2014	70	1,663	8	1,390
9/26/2014	78	1,671	9	1,391
10/3/2014	78	1,671	14	1,396
10/9/2014	84	1,677	15	1,397
10/16/2014	89	1,682	15	1,397
10/23/2014	119	1,712	12	1,394
10/31/2014	138	1,731	19	1,401
11/6/2014	132	1,725	19	1,401
11/17/2014	138	1,731	23	1,405
11/21/2014	157	1,750	23	1,405
11/26/2014	167	1,760	17	1,399
12/2/2014	177	1,770	17	1,399
12/9/2014	180	1,773	20	1,402
12/16/2014	194	1,787	17	1,399
12/23/2014	201	1,794	17	1,399
12/26/2014	207	1,800	14	1,396
	GRA	ND TOTAL		1,396

Note 1: The volume of water and diesel fuel contained in the tanks is based on dipstick measurements to the nearest 0.25 inch. The quantity of water is estimated using water-finding paste applied to the lower portion of the dipstick. Dipstick measurements are converted to gallons using a tank chart.

Note 2: * Tank emptied on August 6, 2009, June 17, 2010, September 10, 2010, July 15, 2011, August 30, 2012, May 9, 2013, September 6, 2013, and May 31, 2014

Date	Apparent Thickness of Free Product Observed in Recovery Wells (Inches)				
	RW-1	RW-2	RW-3	RW-4	
3/16/2009	0.00	0.25	2.00	1.00	
4/2/2009	0.00	0.19	1.75	0.01	
5/7/2009	0.00	0.50	1.75	0.20	
5/21/2009	0.00	0.50	1.50	0.25	
5/28/2009	0.00	0.13	0.13	0.25	
6/4/2009	0.005	0.13	0.38	0.13	
6/11/2009	Not Measured	0.13	0.25	0.13	
6/18/2009	0.005	0.13	0.38	0.005	
6/25/2009	0.005	0.13	0.38	0.005	
7/2/2009	0.005	0.13	0.25	0.005	
7/9/2009	0.005	0.13	0.25	0.005	
7/16/2009	0.005	0.13	0.25	0.13	
7/23/2009	0.005	0.13	0.25	0.13	
7/30/2009	0.005	0.25	0.375	0.005	
8/6/2009	0.005	0.375	0.375	0.005	
8/13/2009	0.005	0.5	4.5	0.5	
8/20/2009	0.005	0.5	0.75	0.5	
8/27/2009	0.005	0.25	0.375	0.25	
9/3/2009	0.005	0.25	0.375	0.25	
9/10/2009	0.005	0.25	2.75	0.25	
9/17/2009	0.005	0.25	5.0	5.5	
9/24/2009	0.005	0.25	5.0	5.0	
10/2/2009	0.005	0.25	5.0	7.0	
10/8/2009	0.005	0.25	6.0	7.5	
10/15/2009	0.005	0.9	8.0	9.8	
10/22/2009	0.005	0.125	0.8	2.0	
10/29/2009	0.19	0.125	0.005	0.5	
11/5/2009	0.005	0.125	0.25	0.005	
11/12/2009	0.005	0.125	0.25	0.125	
11/19/2009	0.005	0.125	0.25	0.125	
11/25/2009	0.005	0.125	0.375	0.25	
12/3/2009	0.005	0.125	0.5	0.375	
12/11/2009	0.005	0.5	0.5	0.125	
12/18/2009	0.005	0.38	0.5	0.125	
12/24/2009	0.005	0.125	0.5	0.25	
12/31/2009	0.005	0.005	0.25	0.125	
1/7/2010	0.005			0.188	
1/15/2010	0.005	0.125	0.75	0.25	
1/22/2010	0.005	0.25	1.0	0.375	
1/27/2010	0.005	0.125	0.75	0.375	
2/4/2010	0.005	0.25	1.0	0.375	
2/12/2010	0.50	0.375	0.75	0.375	
2/18/2010	0.005	0.125	0.125	0.005	
2/25/2010	0.005	0.125	0.125	0.005	
3/5/2010	0.125	0.25	0.625	0.125	
3/12/2010	0.005	0.25	0.25	0.005	
3/19/2010	0.005	0.5	2.0	0.005	
3/26/2010	0.005	0.25	1.0	0.005	

Date	Apparent Thickness of Free Product Observed in Recovery Wells (Inches)					
4/1/2010	RW-1	RW-2	RW-3	RW-4		
4/1/2010	0.005	0.38	1.0	0.005		
4/8/2010	0.125	0.375	0.25	0.005		
4/16/2010	0.005	0.125	0.25	0.005		
4/22/2010	0.005	0.25	1.0	0.0125		
4/30/2010	0.005	0.13	0.25	0.005		
5/7/2010	0.005	0.25	0.625	0.125		
5/14/2010	0.125	0.25	0.375	0.125		
5/21/2010	0.005	0.13	0.25	0.005		
5/28/2010	0.005	0.125	0.75	0.125		
6/4/2010	0.005	0.125	0.50	0.125		
6/10/2010	0.005	0.125	0.25	0.125		
6/17/2010	0.005	0.125	0.25	0.125		
6/24/2010	0.005	0.25	0.25	0.125		
7/1/2010	0.005	0.125	0.50	0.125		
7/8/2010	0.005	0.125	0.25	1.25		
7/14/2010	0.005	0.125	0.50	4.25		
7/22/2010	0.005	0.005	0.25	1.50		
7/29/2010	0.005	0.005	0.75	1.50		
8/6/2010	0.005	0.005	0.25	4.00		
8/12/2010	0.005	0.005	0.50	3.75		
8/19/2010	0.005	0.125	0.25	2.50		
8/26/2010	0.005	0.005	0.25	0.13		
9/3/2010	0.005	0.005	0.25	0.50		
9/10/2010	0.005	0.005	0.005	0.13		
9/16/2010	0.005	0.005	0.13	0.13		
9/24/2010	0.005	0.005	0.25	0.005		
9/30/2010	0.005	0.005	0.50	0.125		
10/7/2010	0.005	0.005	0.375	0.125		
10/14/2010	0.005	0.005	0.625	0.005		
10/21/2010	0.005	0.005	0.500	0.063		
10/28/2010	0.005	0.005	1.0	0.063		
11/4/2010	0.005	0.005	0.75	0.125		
11/11/2010	0.005	0.005	0.50	0.125		
11/19/2010	0.005	0.005	0.25	0.125		
11/24/2010	0.005	0.125	0.75	0.123		
12/2/2010	0.005	0.125	0.73	0.25		
12/10/2010	0.005	0.005	0.25	0.23		
12/16/2010	0.005	0.003	0.125	0.005		
+	0.005	0.125	0.125	0.005		
12/23/2010	0.005	0.125	0.25	0.125		
12/30/2010	0.005			0.125		
1/6/2011	0.005	0.005	0.75 0.5	0.25		
1/13/2011	0.005	0.005	0.625	0.125		
1/20/2011						
1/27/2011	0.005	0.125	1.0	0.75		
2/4/2011	0.005	0.005	0.5	0.25		
2/17/2011	0.005	0.125	1.0	0.375		
2/24/2011	0.125	0.005	0.5	0.25		
3/3/2011	0.005	0.25	0.75	0.5		
3/10/2011 3/17/2011	0.005	0.005	0.5	0.4		

Date	Apparent Thickness of Free Product Observed in Recovery Wells (Inches)					
3/24/2011	RW-1	RW-2	RW-3	RW-4		
3/24/2011	0.005	0.005	0.75	0.125		
3/31/2011	0.125	0.005	0.5	1.0		
4/7/2011	0.005	0.125	0.6	0.375		
4/14/2011	0.005	0.005	0.75	0.25		
4/22/2011	0.005	0.005	1.0	0.5		
4/28/2011	0.005	0.125	0.5	0.25		
5/5/2011	0.005	0.005	0.25	1.5		
5/12/2011	0.005	0.005	0.25	0.75		
5/19/2011	0.005	0.125	0.5	1.0		
5/27/2011	0.005	0.005	0.75	1.5		
6/2/2011	0.005	0.125	0.5	1.5		
6/10/2011	0.005	0.125	0.5	2.0		
6/16/2011	0.005	0.125	1.0	3.0		
6/23/2011	0.005	0.005	1.0	2.5		
6/30/2011	0.005	0.25	1.5	3.0		
7/7/2011	0.005	0.125	1.0	2.5		
7/15/2011	0.005	0.005	0.75	2.0		
7/21/2011	0.005	0.005	0.75	1.5		
7/29/2011	0.005	0.25	1.0	3.0		
8/4/2011	0.005	0.125	4.0	5.0		
8/11/2011	0.005	0.005	1.0	10.5		
8/18/2011	0.005	0.005	1.0	0.25		
8/25/2011	0.005	Not Measured	1.0	0.375		
9/1/2011	0.005	Not Measured	0.75	0.375		
9/8/2011	0.005	Not Measured	0.25	0.25		
9/15/2011	0.005	Not Measured	0.5	0.75		
9/22/2011	0.005	Not Measured	1.0	1.25		
9/30/2011	0.005	0.125	0.25	0.375		
10/6/2011	0.005	0.005	0.375	0.375		
10/13/2011	0.005	0.005	0.375	0.50		
10/21/2011	0.005	0.005	0.50	0.25		
10/28/2011	0.005	0.125	0.25	0.005		
11/4/2011	0.005	0.005	0.375	0.125		
11/11/2011	0.005	0.005	0.250	0.250		
11/18/2011	0.005	0.005	0.250	0.125		
11/23/2011	0.005	0.005	0.75	0.50		
12/1/2011	0.005	0.125	0.50	0.25		
12/8/2011	0.005	0.005	0.375	0.125		
12/15/2011	0.005	0.005	0.375	0.125		
12/22/2011	0.005	0.005	0.5	0.25		
12/29/2011	0.005	0.125	1.0	0.375		
1/5/2012	0.005	0.005	0.75	0.25		
1/12/2012	0.005	0.125	0.50	0.25		
1/20/2012	0.005	0.125	0.75	0.50		
1/27/2012	0.005	0.005	0.50	0.25		
2/2/2012	0.005	0.125	0.625	0.005		
2/9/2012	0.005	0.005	0.50	0.125		
2/16/2012	0.005	0.005	0.25	0.125		
2/23/2012	0.005	0.005	0.375	0.005		
3/1/2012	0.005	0.25	1.25	0.625		

Date	Apparent Thickness of Free Product Observed in Recovery Wells (Inches)					
3/8/2012	RW-1	RW-2	RW-3	RW-4		
3/8/2012	0.005	0.25	1.25	0.625		
3/15/2012	0.005	0.005	2.5	0.5		
3/22/2012	0.005	0.005	0.25	0.125		
3/29/2012	0.005	0.005	0.13	0.125		
4/6/2012	0.005	0.005	0.750	0.375		
4/12/2012	0.005	0.005	0.625	0.125		
4/19/2012	0.005	0.005	0.50	0.005		
4/26/2012	0.005	0.005	0.50	0.005		
5/4/2012	0.005	0.125	0.625	0.25		
5/11/2012	0.005	0.125	0.750	0.25		
5/31/2012	0.125	0.25	0.75	0.50		
6/7/2012	0.125	0.25	1.00	0.50		
6/15/2012	0.005	0.005	0.625	0.375		
6/22/2012	0.005	0.125	0.375	0.25		
6/29/2012	0.005	0.125	0.75	1.0		
7/9/2012	0.005	0.005	0.25	0.5		
7/13/2012	0.005	0.005	0.125	0.25		
7/20/2012	0.005	0.005	0.125	0.25		
7/26/2012	0.005	0.005	0.125	0.005		
8/2/2012	0.005	0.005	0.25	0.125		
8/10/2012	0.005	0.005	0.75	0.375		
8/16/2012	0.005	0.125	0.50	0.25		
8/23/2012	0.005	0.060	0.25	0.25		
8/30/2012	0.005	N/A	0.25	0.375		
9/6/2012	0.005	0.005	0.50	0.25		
9/14/2012	0.005	0.005	0.25	0.25		
9/20/2012	0.005	0.125	0.50	0.25		
9/27/2012	0.005	0.125	0.375	0.25		
10/4/2012	0.005	0.005	0.50	0.25		
10/11/2012	0.005	0.25	1.50	1.00		
10/19/2012	0.005	0.005	0.50	0.25		
10/26/2012	0.005	0.005	0.25	0.25		
11/1/2012	0.005	0.005	1.50	0.25		
11/8/2012	0.005	0.005	1.00	0.50		
11/21/2012	0.005	0.005	0.50	0.25		
11/29/2012	0.005	0.005	0.50	0.25		
12/6/2012	0.005	0.005	0.50	0.13		
12/13/2012	0.005	0.005	0.50	0.25		
12/20/2012	0.005	0.005	0.50	0.25		
12/27/2012	0.005	0.005	0.50	0.25		
1/3/2013	0.005	0.005	1.00	0.005		
1/9/2013	0.005	0.005	1.00	0.005		
1/16/2013	0.005	0.005	0.5	0.005		
1/24/2013	0.005	0.005	0.5	0.005		
2/4/2013	0.005	0.005	0.005	0.005		
2/8/2013	0.005	0.005	0.06	0.005		
2/14/2013	0.005	0.005	0.06	0.005		
2/21/2013	0.00	0.00	0.25	0.25		
2/28/2013	0.00	0.00	0.75	0.25		
3/8/2013	0.00	0.00	0.75	0.00		

Date	Appare	Apparent Thickness of Free Product Observed in Recovery Wells (Inches)			
	RW-1	RW-2	RW-3	RW-4	
3/15/2013	0.00	0.00	0.13	0.13	
3/22/2013	0.00	0.00	0.00	0.00	
3/28/2013	0.00	0.00	0.13	0.00	
4/4/2013	0.00	0.00	0.13	0.13	
4/12/2013	0.00	0.00	0.00	0.13	
4/19/2013	0.00	0.00	0.00	0.00	
4/26/2013	0.00	0.00	0.00	0.00	
5/3/2013	0.00	0.00	0.00	0.00	
5/9/2013	0.06	0.00	0.00	0.00	
5/16/2013	0.13	Sheen	0.125	Sheen	
5/24/2013	Sheen	Sheen	0.375	Sheen	
5/30/2013	Sheen	Sheen	0.125	0.125	
6/7/2013	Sheen	0.125	Sheen	Sheen	
6/13/2013	0.13	0.125	Sheen	Sheen	
6/21/2013	0.00	Sheen	Sheen	0.125	
6/28/2013	Sheen	Sheen	0.00	Sheen	
7/5/2013	Sheen	0.125	0.125	0.00	
7/11/2013	Sheen	Sheen	0.125	Sheen	
7/18/2013	Sheen	0.125	0.375	0.25	
7/25/2013	Sheen	0.125	0.125	Sheen	
8/2/2013	Sheen	Sheen	0.125	0.125	
8/9/2013	Sheen	Sheen	0.375	0.125	
8/16/2013	Sheen	Sheen	0.250	0.125	
8/23/2013	Sheen	Sheen	1.0	0.25	
8/30/2013	Sheen	Sheen	0.5	0.125	
9/6/2013	Sheen	Sheen	0.625	0.125	
9/12/2013	Sheen	Sheen	0.125	1.0	
9/19/2013	Sheen	Sheen	0.25	1.0	
9/27/2013	0.125	Sheen	0.5	2.5	
10/4/2013	0.125	Sheen	0.375	1.0	
10/11/2013	Sheen	Sheen	0.125	0.75	
10/18/2013	0.125	Sheen	0.50	0.50	
10/25/2013	Sheen	Sheen	0.25	Sheen	
11/1/2013	Sheen	Sheen	0.25	Sheen	
11/8/2013	Sheen	Sheen	0.125	Sheen	
11/15/2013	Sheen	Sheen	0.125	Sheen	
11/22/2013	Sheen	Sheen	Sheen	Sheen	
11/27/2013	Sheen	Sheen	0.125	Sheen	
12/4/2013	Sheen	Sheen	Sheen	Sheen	
12/13/2013	Sheen	Sheen	0.125	Sheen	
12/19/2013	Sheen	Sheen	0.125	Sheen	
12/27/2013	Sheen	Sheen	0.125	0.25	
1/10/2014	Sheen	Sheen	Sheen	0.125	
1/17/2014	Sheen	Sheen	0.125	Sheen	
1/31/2014	Sheen	Sheen	Sheen	Sheen	
2/12/2014	Unable to Check	Unable to Check	Unable to Check	Unable to Check	
2/28/2014	Sheen	Sheen	0.25	Sheen	
3/7/2014	Sheen	Sheen	0.125	Sheen	
		0.25	0.125		
3/14/2014 3/21/2014	Sheen	Sheen	0.125	Sheen 0.125	

Date	Apparent Thickness of Free Product Observed in Recovery Wells (Inches)			
	RW-1	RW-2	RW-3	RW-4
3/28/2014	Sheen	Sheen	0.25	1.0
4/4/2014	Sheen	Sheen	Sheen	Sheen
4/11/2014	Sheen	Sheen	Sheen	0.25
4/18/2014	Sheen	Sheen	Sheen	1.0
4/25/2014	Sheen	Sheen	1.0	2.0
4/30/2014	Sheen	Sheen	0.5	1.0
5/8/2014	Sheen	Sheen	1.0	0.07
5/16/2014	Sheen	Sheen	0.06	Sheen
5/23/2014	Sheen	Sheen	Sheen	Sheen
5/30/2014	Sheen	Sheen	Sheen	Sheen
6/6/2014	Sheen	Sheen	Sheen	Sheen
6/13/2014	Sheen	Sheen	0.5	Sheen
6/23/2014	Sheen	Sheen	0.75	Sheen
6/27/2014	Sheen	Sheen	0.25	Sheen
7/7/2014	Sheen	Sheen	0.063	Sheen
7/11/2014	Sheen	Sheen	1.0	Sheen
7/18/2014	Sheen	Sheen	0.5	Sheen
7/23/2014	0.0	0.0	6.0	0.0
8/1/2014	0.0	0.0	1.0	0.0
8/8/2014	0.0	0.0	1.0	0.13
8/15/2014	Sheen	Sheen	0.25	0.25
8/22/2014	Sheen	Sheen	Sheen	Sheen
8/29/2014	0.0	0.0	0.0	0.0
9/4/2014	0.0	0.0	0.0	0.0
9/12/2014	0.0	0.0	0.0	0.0
9/19/2014	0.1	0.1	0.5	0.0
9/26/2014	0.0	0.0	0.5	0.0
10/3/2014	0.0	0.0	0.25	0.0
10/9/2014	0.0	0.1	0.5	0.5
10/16/2014	0.0	0.0	0.5	1.0
10/23/2014	0.0	0.0	0.75	0.25
10/31/2014	0.0	0.0	1.0	0.25
11/6/2014	0.0	0.0	1.0	0.25
11/17/2014	0.0	0.0	0.5	0.1
11/21/2014	0.0	0.0	0.1	0.25
11/26/2014	0.0	0.0	0.1	0.1
12/2/2014	0.0	0.0	0.25	0.1
12/9/2014	0.0	0.0	0.1	0.1
12/16/2014	0.0	0.0	0.25	0.25
12/23/2014	0.0	0.0	0.25	0.25
12/26/2014	0.0	0.0	1.0	1.0

 $\label{eq:Notes:product} \textbf{Notes}: \ \ \text{Free product checked by lowering a bottom-filling bailer into the water table surface, retrieving it, and measuring with a tape measure. In 1Q2013 and earlier, "0.005 inches" indicates that only a sheen was present. \\$



Locomotive Shop Diesel Fuel Remediation System

Date: 10/3/2014 Time: 1:00 P Weather Conditions: Mostly Cloudy, 57° F.	M Observations by: Alex Huang Weaver Boos Consultants, LLC
FUNCTIONAL PARAMETERS	
Panel Warning Lights Illuminated? (Y/N): Blower Operating Normally? (Y/N): Blower Vacuum on Arrival (in H ₂ O): Blower Filter OK? (Y/N): Y Air Compressor Operating Normally? (Y/N): Compressor Auto Drain OK? (Y/N): Pump Pressure (psi): Shed Exhaust Fan Working Normally? (Y/N):	ank N:Low Vac. N:Low Press. N:Fire Suppression Blower Vacuum on Departure (in H ₂ O): 15 If no, was it replaced? Observed cycle pressures (psi): :Low :High Set Point for Operation (°F): 90
Shed Heater Operating Normally? (Y/N): N/A	Set Point for Operation (°F): Min + 2
Water in Vacuum Lines? Yes, one gal	
OIL RECOVERY MEASUREMENTS	
Total Fluid Level in Tank (in): 11.25 Water Level in Tank (in): 10.00	Total Fluid Volume in Tank (gal): 92.27 Water Volume in tank (gal): 78.01 Oil Volume in Tank (total fluid volume less water volume (gal): 14.26
Pumping time (Read from Controller): RW-1 438 :hr RW-2 414 :hr	33 :min RW-3 438 :hr 31 :min 30 :min RW-4 438 :hr 46 :min
FREE PRODUCT MEASUREMENTS	
Free Product in RW-1 (in): 0.00 Free Product in RW-2 (in): 0.00	Free Product in RW-3 (in): 0.25 Free Product in RW-4 (in): 0.00
Remarks: * Manually drained 0.2 gallons from co Blower vacuum was fluctuating between 18	•

Contact: S. Stanford, Weaver Boos Consultants, LLC

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Locomotive Shop Diesel Fuel Remediation System

Date: 10/9/2014 Time: 12:02 Weather Conditions: Clear, 52° F.		lex Huang Weaver Boos Consultants, LLC
FUNCTIONAL PARAMETERS		
Panel Warning Lights Illuminated? (Y/N): N :Full Blower Operating Normally? (Y/N): Y	<u> </u>	ow Press. N :Fire Suppression
Blower Vacuum on Arrival (in H ₂ O): 20		parture (in H ₂ O):
Blower Filter OK? (Y/N): Y	If no, was it replaced?	 .
Air Compressor Operating Normally? (Y/N): Y	0	bserved cycle pressures (psi)::Low:High
Compressor Auto Drain OK? (Y/N): N*		
Pump Pressure (psi): 86		Out Bright (a. Ou continue (05)
Shed Exhaust Fan Working Normally? (Y/N): Y		Set Point for Operation (°F): 90
Shed Heater Operating Normally? (Y/N): N/A	asllana armand	Set Point for Operation (°F): Min + 2
Water in Vacuum Lines? Yes, sever	gallons purged	
OIL RECOVERY MEASUREMENTS		
OIL RECOVERT MEASUREMENTS		Read from Tank Chart
Total Fluid Level in Tank (in): 11.75	T	otal Fluid Volume in Tank (gal): 98.14
Water Level in Tank (in): 10.50	1	Water Volume in tank (gal): 83.62
water Lever III Tank (III).	Oil Volume in Tank (total fluid vol	, <u> </u>
	on voiding in rain (total riala voi	amo 1000 water volume (gar).
Pumping time (Read from Controller): RW-1 442 :hr	33 :min	RW-3 442 :hr 31 :min
RW-2 416 :hr	30 :min	RW-4 442 :hr 46 :min
		<u></u>
FREE PRODUCT MEASUREMENTS		
Free Product in RW-1 (in): 0.00	Free Product in	RW-3 (in): 0.50
Free Product in RW-2 (in): 0.10	Free Product in	RW-4 (in): 0.50
Remarks: * Manually drained 0.1 gallon from co		
Blower vacuum was fluctuating between 1	8-22 psi on arrival.	

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Locomotive Shop Diesel Fuel Remediation System

Date: 10/16/2014 Time: 1:42 PM Weather Conditions: Overcast, 57° F.		lex Huang Weaver Boos Consultants, LLC
FUNCTIONAL PARAMETERS		
Panel Warning Lights Illuminated? (Y/N): N :Full Tar Blower Operating Normally? (Y/N): Y Blower Vacuum on Arrival (in H ₂ O): 20 Blower Filter OK? (Y/N): Y Air Compressor Operating Normally? (Y/N): Y	Blower Vacuum on Dep	cow Press. N :Fire Suppression Dearture (in H ₂ O): 15 Deserved cycle pressures (psi): :Low :High
Compressor Auto Drain OK? (Y/N): N* Pump Pressure (psi): 86 Shed Exhaust Fan Working Normally? (Y/N): Y Shed Heater Operating Normally? (Y/N): N/A Water in Vacuum Lines? Yes, five gallo	ns purged	Set Point for Operation (°F): 90 Set Point for Operation (°F): Min + 2
OIL RECOVERY MEASUREMENTS		
Total Fluid Level in Tank (in): 12.25 Water Level in Tank (in): 11.00	To il Volume in Tank (total fluid vol	Read from Tank Chart otal Fluid Volume in Tank (gal): Water Volume in tank (gal): 104.08 89.36 lume less water volume (gal): 14.72
Pumping time (Read from Controller): RW-1 447 :hr RW-2 418 :hr	13 :min 50 :min	RW-3 447 :hr 11 :min RW-4 447 :hr 26 :min
FREE PRODUCT MEASUREMENTS		
Free Product in RW-1 (in): O.00 Free Product in RW-2 (in): 0.00		RW-3 (in): 0.50 RW-4 (in): 1.00
Remarks: * Manually drained 0.25 gallon from com All four skimmer pumps were adjusted to with		fluctuating between 18-22 psi on arrival.

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Locomotive Shop Diesel Fuel Remediation System

Date: 10/23/2014 Time: 10:3 Weather Conditions: Partly cloudy, 45° F.		lex Huang Weaver Boos Consultants, LLC
FUNCTIONAL PARAMETERS		
Panel Warning Lights Illuminated? (Y/N): N :Full Blower Operating Normally? (Y/N): Y Blower Vacuum on Arrival (in H ₂ O): 20 Blower Filter OK? (Y/N): Y		Low Press. N :Fire Suppression parture (in H ₂ O): 15
Air Compressor Operating Normally? (Y/N): Y Compressor Auto Drain OK? (Y/N): N* Pump Pressure (psi): 85	<u>o</u>	Observed cycle pressures (psi)::Low:High
Shed Exhaust Fan Working Normally? (Y/N): Y Shed Heater Operating Normally? (Y/N): N/A Water in Vacuum Lines? Yes, 5.5 g	allons purged	Set Point for Operation (°F): 90 Set Point for Operation (°F): Min + 2
OIL RECOVERY MEASUREMENTS		
Total Fluid Level in Tank (in): 14.50 Water Level in Tank (in): 13.50	Oil Volume in Tank (total fluid vol	otal Fluid Volume in Tank (gal): Water Volume in tank (gal): 119.26 Ume less water volume (gal): 12.48
Pumping time (Read from Controller): RW-1 451 :hr RW-2 421 :hr	43 :min 5 :min	RW-3 451 :hr 41 :min RW-4 451 :hr 56 :min
FREE PRODUCT MEASUREMENTS		
Free Product in RW-1 (in): 0.00 Free Product in RW-2 (in): 0.00	Free Product in Free Product in	RW-3 (in): 0.75 RW-4 (in): 0.25
Remarks: * Manually drained 0.10 gallon from a Fluid levels remain within 0.5 feet of opting		iluctuating between 18-22 psi on arrival.

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Locomotive Shop Diesel Fuel Remediation System

Date: 10/31/2014 Time: 2:08 PN Weather Conditions: Wintry mix, 38° F.	M Observations by:	Alex Huang Weaver Boos Consultants, LLC
FUNCTIONAL PARAMETERS		
Panel Warning Lights Illuminated? (Y/N): N :Full Ta Blower Operating Normally? (Y/N): Y Blower Vacuum on Arrival (in H ₂ O): 21 Blower Filter OK? (Y/N): Y Air Compressor Operating Normally? (Y/N): Y		:Low Press. N :Fire Suppression Departure (in H ₂ O): 15 Observed cycle pressures (psi): :Low :High
Compressor Auto Drain OK? (Y/N): N* Pump Pressure (psi): 85 Shed Exhaust Fan Working Normally? (Y/N): Y Shed Heater Operating Normally? (Y/N): N/A Water in Vacuum Lines? Yes, 4.5 gallo	ons purged	Set Point for Operation (°F): 90 Set Point for Operation (°F): Min + 2
OIL RECOVERY MEASUREMENTS		
Total Fluid Level in Tank (in): 16.50 Water Level in Tank (in): 15.00	Dil Volume in Tank (total fluid v	Read from Tank Chart Total Fluid Volume in Tank (gal): 157.34 Water Volume in tank (gal): 138.01 volume less water volume (gal): 19.33
Pumping time (Read from Controller): RW-1 457 :hr RW-2 423 :hr	13 :min 50 :min	RW-3 457 :hr 11 :min RW-4 457 :hr 26 :min
FREE PRODUCT MEASUREMENTS		
Free Product in RW-1 (in): 0.00 Free Product in RW-2 (in): 0.00	Free Product Free Product	t in RW-3 (in): 1.00 t in RW-4 (in): 0.25
Remarks: * Manually drained 0.10 gallon from cor	mpressor. Blower vacuum wa	as fluctuating between 19-23 psi on arrival.

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Locomotive Shop Diesel Fuel Remediation System

Date: 11/6/2014 Time: 12:13 PM Observations by: Weather Conditions: Light rain, moderate wind, 38° F.	Alex Huang Weaver Boos Consultants, LLC
FUNCTIONAL PARAMETERS	
Panel Warning Lights Illuminated? (Y/N): N :Full Tank N :Low Vac. N Blower Operating Normally? (Y/N): Y	:Low Press. N :Fire Suppression Departure (in H ₂ O): 15 Observed cycle pressures (psi): 135 :Low 170 :High
Shed Exhaust Fan Working Normally? (Y/N): Shed Heater Operating Normally? (Y/N): Water in Vacuum Lines? Yes, 6 gallons purged	Set Point for Operation (°F): 90 Set Point for Operation (°F): Min + 2
OIL RECOVERY MEASUREMENTS	
Total Fluid Level in Tank (in):16.00 Water Level in Tank (in):14.50 Oil Volume in Tank (total fluid v	Read from Tank Chart Total Fluid Volume in Tank (gal): 150.88 Water Volume in tank (gal): 131.74 volume less water volume (gal): 19.14
Pumping time (Read from Controller): RW-1 461 :hr 13 :min RW-2 425 :hr 50 :min	RW-3 461 :hr 11 :min RW-4 461 :hr 26 :min
FREE PRODUCT MEASUREMENTS	
Free Product in RW-1 (in): 0.00 Free Product Free Product in RW-2 (in): 0.00 Free Product	in RW-3 (in): 1.00 in RW-4 (in): 0.25
Remarks: * Manually drained 0.05 gallon from compressor. Blower vacuum was	s fluctuating between 18-22 psi on arrival.

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Locomotive Shop Diesel Fuel Remediation System

Date: 11/17/2014 Time: 2:27 PM Weather Conditions: Partly cloudy, high winds, 2	Observations by: 2° F.	Alex Huang Weaver Boos Consultants, LLC
FUNCTIONAL PARAMETERS		
Panel Warning Lights Illuminated? (Y/N): N :Full Tank Blower Operating Normally? (Y/N): Y Blower Vacuum on Arrival (in H ₂ O): 20 Blower Filter OK? (Y/N): Y		
Air Compressor Operating Normally? (Y/N): Y Compressor Auto Drain OK? (Y/N): N* Pump Pressure (psi): 85		<u> </u>
Shed Exhaust Fan Working Normally? (Y/N): Y Shed Heater Operating Normally? (Y/N): N/A Water in Vacuum Lines? Yes, 10 gallons p	ourged	Set Point for Operation (°F): 90 Set Point for Operation (°F): Min + 2
OIL RECOVERY MEASUREMENTS		
Total Fluid Level in Tank (in): 16.75 Water Level in Tank (in): 15.00 Oil V	/olume in Tank (total fluid	Read from Tank Chart Total Fluid Volume in Tank (gal): 160.64 Water Volume in tank (gal): 138.01 volume less water volume (gal): 22.63
Pumping time (Read from Controller): RW-1 468 :hr RW-2 429 :hr	33 :min 30 :min	RW-3 468 :hr 31 :min RW-4 468 :hr 46 :min
FREE PRODUCT MEASUREMENTS		
Free Product in RW-1 (in): O.00 Free Product in RW-2 (in): 0.00		t in RW-3 (in): 0.50 t in RW-4 (in): 0.10
Remarks: * Manually drained 0.1 gallon from compre Water bailed from RW-1 was dark gray but did		

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Locomotive Shop Diesel Fuel Remediation System

Date: 11/21/2014 Time: 1:29 Weather Conditions: Clear, 33° F.	PM Observations by:	Alex Huang Weaver Boos Consultants, LLC
FUNCTIONAL PARAMETERS		
Panel Warning Lights Illuminated? (Y/N): N :Full Telephone Blower Operating Normally? (Y/N): Y :Full Telephone Blower Vacuum on Arrival (in H ₂ O): 21 Blower Filter OK? (Y/N): Y Air Compressor Operating Normally? (Y/N): Y Compressor Auto Drain OK? (Y/N): N*		:Low Press. N :Fire Suppression Departure (in H ₂ O): 15 Observed cycle pressures (psi): 130 :Low 180 :High
Pump Pressure (psi): Shed Exhaust Fan Working Normally? (Y/N): Shed Heater Operating Normally? (Y/N): Water in Vacuum Lines? Yes, 7.5 ga	allons purged	Set Point for Operation (°F): 90 Set Point for Operation (°F): Min + 2
OIL RECOVERY MEASUREMENTS		
Total Fluid Level in Tank (in): 18.25 Water Level in Tank (in): 16.50 Pumping time (Read from Controller): RW-1 471 :hr	_ <u>13_</u> :min	Read from Tank Chart
RW-2 <u>430</u> :hr	<u>50</u> :min	RW-4 471 :hr 26 :min
FREE PRODUCT MEASUREMENTS		
Free Product in RW-1 (in): 0.00 Free Product in RW-2 (in): 0.00	Free Product	t in RW-3 (in): 0.10 t in RW-4 (in): 0.25
Remarks: * Manually drained 0.05 gallon from c	compressor. Blower vacuum wa	as fluctuating between 20-22 psi on arrival.

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Locomotive Shop Diesel Fuel Remediation System

Date: 11/26/2014 Time: 1:0 Weather Conditions: Overcast, 25° F.	Observations by: Alex Huang Weaver Boos Consultants, LLC
FUNCTIONAL PARAMETERS	
Panel Warning Lights Illuminated? (Y/N): N :Fu Blower Operating Normally? (Y/N): Y Blower Vacuum on Arrival (in H ₂ O): 21 Blower Filter OK? (Y/N): Y Air Compressor Operating Normally? (Y/N): Y Compressor Auto Drain OK? (Y/N): N*	Blower Vacuum on Departure (in H ₂ O): 15 If no, was it replaced? Observed cycle pressures (psi)::Low:High
Pump Pressure (psi): 85 Shed Exhaust Fan Working Normally? (Y/N): Y Shed Heater Operating Normally? (Y/N): Y Water in Vacuum Lines? Yes, 7 g	Set Point for Operation (°F): 90 Set Point for Operation (°F): Min + 2 allons purged
OIL RECOVERY MEASUREMENTS	
Total Fluid Level in Tank (in): 18.50 Water Level in Tank (in): 17.25	Total Fluid Volume in Tank (gal): Water Volume in tank (gal): 167.18 Oil Volume in Tank (total fluid volume less water volume (gal): 16.56
Pumping time (Read from Controller): RW-1 474 :hr RW-2 432 :hr	
FREE PRODUCT MEASUREMENTS	
Free Product in RW-1 (in): 0.00 Free Product in RW-2 (in): 0.00	Free Product in RW-3 (in): 0.10 Free Product in RW-4 (in): 0.10
Remarks: * Manually drained 0.05 gallon from	n compressor. Blower vacuum was fluctuating between 19-22 psi on arrival.

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Locomotive Shop Diesel Fuel Remediation System

Date: 12/2/2014 Time: 12:58 PM Weather Conditions: Mostly cloudy, 31° F.	Observations by: Alex Huang Weaver Boos Consultants, LLC
FUNCTIONAL PARAMETERS	
Panel Warning Lights Illuminated? (Y/N): N :Full Tank Blower Operating Normally? (Y/N): Y Blower Vacuum on Arrival (in H ₂ O): 20 Blower Filter OK? (Y/N): N Air Compressor Operating Normally? (Y/N): Y Compressor Auto Drain OK? (Y/N): N*	N :Low Vac. N :Low Press. N :Fire Suppression Blower Vacuum on Departure (in H ₂ O): 15 If no, was it replaced? Yes Observed cycle pressures (psi): :Low :High
Pump Pressure (psi): 85 Shed Exhaust Fan Working Normally? (Y/N): Y Shed Heater Operating Normally? (Y/N): Y Water in Vacuum Lines? Yes, 6 gallons pu	Set Point for Operation (°F): 90 Set Point for Operation (°F): Min + 2 urged
OIL RECOVERY MEASUREMENTS	Read from Tank Chart
Total Fluid Level in Tank (in): 19.25 Water Level in Tank (in): 18.00 Oil V	Total Fluid Volume in Tank (gal): 193.78 Water Volume in tank (gal): 177.08 Volume in Tank (total fluid volume less water volume (gal): 16.70
Pumping time (Read from Controller): RW-1 478 :hr RW-2 434 :hr	33 :min RW-3 478 :hr 31 :min 30 :min RW-4 478 :hr 46 :min
FREE PRODUCT MEASUREMENTS	
Free Product in RW-1 (in): O.00 Free Product in RW-2 (in): 0.00	Free Product in RW-3 (in): 0.25 Free Product in RW-4 (in): 0.10
Remarks: * Manually drained 0.05 gallon from compre	essor. Blower vacuum was fluctuating between 19-21 psi on arrival.

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Locomotive Shop Diesel Fuel Remediation System

Date: 12/9/2014 Time: 12:54 PM Observations Weather Conditions: Light rain, 39° F.	s by: Alex Huang Weaver Boos Consultants, LLC	
FUNCTIONAL PARAMETERS		
Blower Operating Normally? (Y/N): \overline{Y} Blower Vacuum on Arrival (in H ₂ O): $\overline{20}$ Blower Filter OK? (Y/N): \overline{Y} Air Compressor Operating Normally? (Y/N): \overline{Y}	N :Low Press. N :Fire Suppression on on Departure (in H_2O): 15 aced? Observed cycle pressures (psi): 130 :Low 170 :High	
Compressor Auto Drain OK? (Y/N): N* Pump Pressure (psi): 85 Shed Exhaust Fan Working Normally? (Y/N): Y Shed Heater Operating Normally? (Y/N): Y Water in Vacuum Lines? Yes, 5 gallons purged	Set Point for Operation (°F): 90 Set Point for Operation (°F): Min + 2	
OIL RECOVERY MEASUREMENTS		
Total Fluid Level in Tank (in): 19.75 Water Level in Tank (in): 18.25 Oil Volume in Tank (total	Read from Tank Chart Total Fluid Volume in Tank (gal): Water Volume in tank (gal): 180.44 fluid volume less water volume (gal): 200.51 200.7	
Pumping time (Read from Controller): RW-1 483 :hr 13 :min RW-2 436 :hr 50 :min	RW-3 483 :hr 11 :min RW-4 483 :hr 26 :min	
FREE PRODUCT MEASUREMENTS		
Free Product in RW-1 (in): 0.00 Free Product in RW-2 (in): Free Product in RW-2	roduct in RW-3 (in): 0.10 roduct in RW-4 (in): 0.10	
Remarks: * Manually drained 0.1 gallon from compressor. Blower vacuum was fluctuating between 19-21 psi on arrival. Air filter in compressor intake was changed (filter in blower was changed last week).		

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Locomotive Shop Diesel Fuel Remediation System

Date: 12/16/2014 Time: 1:28 PM Observations by Weather Conditions: Overcast, 45° F.	y: Alex Huang Weaver Boos Consultants, LLC	
FUNCTIONAL PARAMETERS		
Blower Operating Normally? (Y/N): Y	N :Low Press. N :Fire Suppression n Departure (in H_2O): 15	
Blower Filter OK? (Y/N): Y If no, was it replace Air Compressor Operating Normally? (Y/N): Y Compressor Auto Drain OK? (Y/N): N* Pump Pressure (psi): 85	Observed cycle pressures (psi)::Low:High	
Shed Exhaust Fan Working Normally? (Y/N): Y Shed Heater Operating Normally? (Y/N): Y Water in Vacuum Lines? Yes, 5 gallons purged	Set Point for Operation (°F): 90 Set Point for Operation (°F): Min + 2	
OIL RECOVERY MEASUREMENTS		
Total Fluid Level in Tank (in): 20.50 Water Level in Tank (in): 19.25 Oil Volume in Tank (total flui	Read from Tank Chart Total Fluid Volume in Tank (gal): Water Volume in tank (gal): 193.78 id volume less water volume (gal): 16.89	
Pumping time (Read from Controller): RW-1 487 :hr 53 :min RW-2 439 :hr 10 :min	RW-3 487 :hr 51 :min RW-4 488 :hr 6 :min	
FREE PRODUCT MEASUREMENTS		
	uct in RW-3 (in): 0.25 uct in RW-4 (in): 0.25	
Remarks: * Manually drained 0.1 gallon from compressor. Blower vacuum was fluctuating between 19-21 psi on arrival. One compression fitting in RW-3 (blue air hose) needs to be replaced.		

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Locomotive Shop Diesel Fuel Remediation System

Date: 12/23/2014 Time: 12:25 Weather Conditions: Partly cloudy, 47° F.	PM Observations by: Alex Huang Weaver Boos Consultants, LLC	
FUNCTIONAL PARAMETERS		
Panel Warning Lights Illuminated? (Y/N): N :Full Table Blower Operating Normally? (Y/N): Y Blower Vacuum on Arrival (in H ₂ O): 20 Blower Filter OK? (Y/N): Y Air Compressor Operating Normally? (Y/N): Y	ank N :Low Vac. N :Low Press. N :Fire Suppression Blower Vacuum on Departure (in H ₂ O): 15 If no, was it replaced? Observed cycle pressures (psi): 130 :Low 180 :High	
Compressor Auto Drain OK? (Y/N): N* Pump Pressure (psi): 85 Shed Exhaust Fan Working Normally? (Y/N): Y Shed Heater Operating Normally? (Y/N): Y Water in Vacuum Lines? Yes, 6 gallor	Set Point for Operation (°F): 90 Set Point for Operation (°F): Min + 2	
OIL RECOVERY MEASUREMENTS		
Total Fluid Level in Tank (in): 21.00 Water Level in Tank (in): 19.75	Read from Tank Chart	
Pumping time (Read from Controller): RW-1 492 :hr RW-2 441 :hr	33 :min RW-3 492 :hr 31 :min 30 :min RW-4 492 :hr 46 :min	
FREE PRODUCT MEASUREMENTS		
Free Product in RW-1 (in): 0.00 Free Product in RW-2 (in): 0.00	Free Product in RW-3 (in): 0.25 Free Product in RW-4 (in): 0.25	
Remarks: * Manually drained 0.05 gallon from compressor. RW-3 skimmer pump removed and taken back to Granger for maintenance. RW-3 automatic control set to "inactive." RW-4 pump may need similar maintenance soon.		

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Locomotive Shop Diesel Fuel Remediation System

Date: 12/26/2014 Time: 11:38 AM Weather Conditions: Partly cloudy, 45° F.	Observations by: Alex Huang Weaver Boos Consultants, LLC	
FUNCTIONAL PARAMETERS		
Panel Warning Lights Illuminated? (Y/N): N :Full Tank Blower Operating Normally? (Y/N): Y Blower Vacuum on Arrival (in H ₂ O): 20 Blower Filter OK? (Y/N): Y Air Compressor Operating Normally? (Y/N): Y Compressor Auto Drain OK? (Y/N): N* Pump Pressure (psi): 85	Blower Vacuum on Departure (in H ₂ O): 15 If no, was it replaced? Observed cycle pressures (psi): :Low :High	
Shed Exhaust Fan Working Normally? (Y/N): Shed Heater Operating Normally? (Y/N): Water in Vacuum Lines? Yes, 2.5 gallons	Set Point for Operation (°F): 90 Set Point for Operation (°F): Min + 2 s purged	
OIL RECOVERY MEASUREMENTS		
Total Fluid Level in Tank (in): 21.25 Water Level in Tank (in): 20.25 Oil Pumping time (Read from Controller): RW-1 494 :hr	Total Fluid Volume in Tank (gal): Water Volume in tank (gal): 1 Volume in Tank (total fluid volume less water volume (gal): 33 :min Read from Tank (Chart 220.90 207.31 13.59	
RW-2 442 :hr	30 :min RW-4 494 :hr 46 :min	
FREE PRODUCT MEASUREMENTS		
Free Product in RW-1 (in): 0.00 Free Product in RW-2 (in): 0.00	Free Product in RW-3 (in): 1.00 Free Product in RW-4 (in): 1.00	
Remarks: * Manually drained 0.05 gallon from compressor. RW-3 is inactive while pump undergoes maintenance. RW-4 is active, but one hose has disconnected from the pump (compression fitting worn-out). The fitting will be replaced soon.		

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